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ABSTRACT

This final report furnishes a summary of the special pre-conference symposium on "White House Conference on Library and Information Services '91: The International Dimension." This symposium focused on the many facets of global library and information services in the light of current needs, governmental programs, private sector initiatives, and the impact of burgeoning advanced information technologies. Included in this report are a description of the symposium's scope, the agenda, summaries of the symposium findings, highlights from the feature presentations, and the recommendations and findings from five discussion groups--which formed the core of activity at the symposium--in the areas of international information activities; the impact of technologies and networks; business and economic aspects; policies and governance; programs; and services for society. Also included are biographies of key symposium leaders, a list of the participants, a 1979 pre-conference summary of findings, a summary of 1979 international issues' resolutions, a list of selected readings, and an epilogue. (MAB)

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THE INTERNATIONAL DIMENSION

A PRE-CONFERENCE SYMPOSIUM

THE WHITE HOUSE CONFERENCE ON LIBRARY AND INFORMATION SERVICES 1991

FINAL REPORT

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This Final Report, designed to furnish a summary of the special symposium on "WHCLIS '91: The International Dimension," was prepared at the direction of Jean M. Curtis, Executive Director of the White House Conference on Library and Information Services. The author of this volume is Robert Lee Chartrand, formerly Senior Fellow in Information Policy and Technology for the Congressional Research Service (Library of Congress), and currently senior advisor to the Executive Director. The cover was designed by K. C. Chartrand, Director of Publications for Research Alternatives, Inc. This contribution was performed in accordance with guidance provided by Mark F. Scully, the WHCLIS Director of Administration.

PROLOGUE

The rationale for convening a special symposium to explore "The International Dimension" of library and information services in our time was twofold. First, it was unthinkable that in an age when, as Dr. Edward Wenk noted in *Margins for Survival*, "events anywhere exert effects everywhere," that this critical focal area could be ignored. Secondly, the ever-expanding roles and responsibilities of libraries and information services must be fathomed far more explicitly than before, and leadership in all quarters of our civilization must utilize these resources to the fullest.

Twelve years ago, in his pre-Conference luncheon on international information exchange remarks, Thomas R. Pickering—now the senior U.S. Representative to the United Nations—shared his perception of why this nation must concern itself with this vital area. The validity of his observation, it must be noted, has not changed.

> The information age is greeted by all of us with expectancy and hope . . . that are tempered with concern that the opportunities of the information age should not be lost by failure to predict and take into account its consequences. . . . Several issues involve fundamental values of morality and individual liberty, of national pride, and of national sovereignty which are factors in the regulation and control of information processing and exchange. These issues of the information age justify a strong national commitment to international discussion and open debate.

Assembled at the Cosmos Club were a remarkable collection of talents, bound together by their dedication to strengthening the information resources which serve all mankind. There is little question today that information is becoming our country's most important national resource. President Bush phrased this development within this context:

> If the United States is to remain a global leader in the 21st century, we must keep pace with rapid advances in technology, as well as with increasing trade and commerce between nations. Our ability to stay ahead depends, in large part, on our ability to stay informed.

The value of the individual and collective contributions toward this Report cannot be overstated, for the findings and recommendations emerging from your deliberations will impact the thinking of this Nation's leaders as they delineate our policies and strategies for the future.

Bob Chartrand

Robert Lee Chartrand
Symposium Chairman

Jean M. Curtis

Jean M. Curtis
Executive Director

INTRODUCTION

In mandating the National Commission on Libraries and Information Science to organize and conduct a second White House Conference on Library and Information Services, the Congress once again was manifesting its serious interest in this focal area. Just as the first (1979) such Conference built a momentum in recognizing the importance of these services, this second Conference would "strive to find pathways to meet the informational needs of the United States and the world in the 21st century."

Three topical themes were selected, after intensive deliberation, which would reflect the perceived needs of the populace and help shape a national posture for the future: furthering literacy, increasing productivity, and strengthening democracy. Each of these in a very special way encompasses an international dimension. Even the most cursory analysis of recent international developments attests to the criticality of "information" in the exchange of ideas, competitiveness, raising the ability of human beings to understand and communicate, and develop more responsive forms of governance.

During the state, territorial, and special preconferences, hundreds of resolutions were passed which dealt with virtually every imaginable topic of concern to the library and information professionals. These identified needs and issues then were examined in depth by a group of highly qualified volunteers. Ten focal areas were selected in order to facilitate subsequent analysis and action at the Conference: access, governance, marketing, networking, national information policies, personnel, preservation, services/programs, technology, and training of end-users. Every one of these categories holds a potential international aspect, and it is an aim of this Symposium to consider which of these topics deserve to be presented for further treatment during the full Conference.

Yet another approach to pondering the international aspects of library and information services is to look once again at the priority issues which have drawn congressional attention, and resulted in the passage of more than 300 Public Laws in the past 15 years. A useful taxonomy, much employed in legislative publications, includes: telecommunications, broadcasting, and satellite transmission; international communications and information policy; library and archives policies; information disclosure, confidentiality, and the right of privacy; computer security, regulation, and crime; intellectual property; information technology for education, innovation, and competitiveness; Federal information resources management; and government information, clearinghouses, and dissemination.

The challenges inherent within this gamut of activities exist as unparalleled opportunities for those charged with ensuring the viability of library and information services in the years ahead.

SYMPOSIUM SCOPE AND SUBSTANCE

In shaping this Symposium to focus on "The International Dimension" of both contemporary and foreseeable library and information services, particular care was taken to bring together those experienced professionals whose philosophical insights and pragmatic findings can help chart a course for the future. Through a meld of oral commentaries designed to establish a common context for subsequent group discussions and those interlocutory sessions led by handpicked teams of group leaders and rapporteurs, useful findings and recommendations ensued.

It was the belief of the planning group for this special event—Jane Bortnick, Robert Lee Chartrand, George M. Kroloff, James W. Morentz, Jr., William C. Salmon, James R. Trawick, and William J. Welsh —that the many facets of global library and information services be thoroughly examined in the light of current needs, governmental programs, private sector initiatives, and the impact of burgeoning advanced information technologies.

Throughout the dozen years since the previous White House Conference on Library and Information Services (1979), an array of initiatives has been mounted within the public and private sectors touching on virtually every facet of the 64 resolutions emerging from that earlier assembly. In the realm of international information activities, the incredible changes wrought by political realignments and technological advances alone have brought with them concomitant alterations in the essence and offerings of library and information services. As the discussants engaged in addressing their discrete focal topics, they found themselves doing so against a backdrop of such macroconsiderations as:

(1) Developments during the past decade affecting U.S. creation of internationally oriented "information policies," mechanisms, and programs.
(2) A growing awareness within government(s) and private sector groups that redelineations of existing laws, international agreements, and unwritten working arrangements may be in order.
(3) The remarkable and inexorable changes occurring in the world of information technologies.
(4) The critical and often kaleidoscopic shifts and transformations affecting the "user" constituencies, as well as those responsible for information generation, collection, processing, and delivery.

The invaluable core of activity at the Symposium is found in the five discussion groups, for it is through their deliberations and determinations that the delegates and observers attending WHCLIS '91 will be afforded the means of grasping the vital international dimension. The Groups: I. Overview of International Information Activities; II. Impact of Technologies and Networks; III. Business and Economic Aspects; IV. Policies and Governance; and V. Programs and Services for Society. Group findings were presented as 10-minute oral summaries at the final plenary session and are included within this Report.

SYMPOSIUM AGENDA

9:00-9:10 AM **Introduction**
Robert Lee Chartrand
Symposium Chairman

9:10-9:30 AM **Keynote Address**
Dr. Toni Carbo Bearman, Dean
School of Library and Information Science
University of Pittsburgh

9:30-9:45 AM **Presentation on "Productivity"**
Dr. Joseph W. Duncan
Corporate Economist & Chief Statistician
The Dun & Bradstreet Corporation

9:45-10:00 AM **Presentation on "Literacy"**
Gary R. Rowe, Senior Vice President
Turner Educational Services
Turner Broadcasting System

10:00-10:15 AM **Presentation on "Democracy"**
Dr. Elizabeth L. Young, Vice President
Aeronautical Services
COMSAT Corporation

10:15-10:30 AM **Break**

10:30-12:15 PM **Breakout Group Sessions:**

Group Focus I. Overview of International Information Activities
George M. Kroloff — *Group Leader*
Melvin S. Day — *Rapporteur*

Group Focus II. Impact of Technology and Networks
Curtis L. Fritz — *Group Leader*
James W. Morentz, Jr. — *Rapporteur*

Group Focus III. Business and Economic Aspects
Oswald H. Ganley — *Group Leader*
James R. Trawick — *Rapporteur*

Group Focus IV. Policies and Governance
Jane Bortnick — *Group Leader*
Thomas J. Galvin — *Rapporteur*

Group Focus V. Programs and Services for Society
Joseph E. Clark — *Group Leader*
Kenneth W. Hunter — *Rapporteur*

SYMPOSIUM AGENDA

12:30-1:45 PM	**Luncheon** *Speaker:* Kenneth W. Bleakley Senior Deputy U.S. Coordinator International Communications and Information Policy U.S. Department of State
1:45-3:45 PM	**Breakout Group Sessions**
3:45-4:45 PM	**Groups Report to General Session**
4:45-5:00 PM	**Closing Remarks and Adjourn**

SUMMARY OF SYMPOSIUM FINDINGS

As the five discussion groups worked to sort out the salient library and information services' international issues, impacts, and institutional implications—against the backdrop of a similar endeavor in 1979—it soon became apparent that certain old problems possessed a strong residual quality. An acute awareness of the roles and responsibilities of both public and private sector entities, whether on the national scene or embodied in international institutions, was present as the participants viewed their "world of information" within the larger context of recent political and economical global changes. Of the 12 major focal concerns noted below, the first five were targeted in 1979 but merited a high priority at the present time. The remainder signify a selection from among many identifiable areas of serious concern and also were often a subject of past consideration.

- "creation of a mechanism for coordinating U. S. information policies." The emphasis in 1991 was more on creating a listing and explanation of U. S. information policies.
- "improvement of information flow to LDCs." Especial attention was paid at this time to the multi-media offerings now available, and the criticality of providing not only the technology but the "know-how" for using it.
- "improvement of acquisition of foreign materials for this Nation." The continuing matter of language barriers was raised again, along with a desire to see an "information commons" ways of thinking evolved.
- "addressing the problem of lag between technology and society's response to it." Increasingly, there is concern over the need for new mechanisms and methods for evaluating information products, technologies, and services, and their contributions to lifestyles and economies.
- "improvement of standards for facilitating international information flow." As basic as this key topic remains, there is no diminution in the feeling that much more must be done, particularly as multi-media formatting and transfer systems come into increasing vogue.
- the need for enhanced education and training that will allow the more fulsome exploitation of information technologies and their attendant services, both here and in other countries.
- new "institutional partnerships" must be devised and encouraged which encompass those groups heretofore involved and new members with something additional to contribute to such arrangements.
- the customization of information in order to expand and facilitate its usage, with an awareness expressed about the need to facilitate technical information handling (especially in developing nations).
- increase government and private sector funding of research to deal with growing technical and language interface problems, nationally and internationally, and rising requirements for better information management.
- an undeniable requirement exists for strengthening and augmenting the cadre of human facilitators (and interpreters) who make technology-supported information systems understandable and useful to novice users.
- encourage and require the U. S. government to press for the reduction or elimination of barriers to access to worldwide markets for information products and services.
- develop a series of exchange programs whereby the library and information technology communities can engage in bilateral and multilateral endeavors involving professionals, practitioners, and students.

These selections represent, it must be stressed once again, the collective scrutiny of leading professionals charged with elucidating some of the challenges and dilemmas facing contemporary policymakers and program managers. Perhaps that unknown sage was remarkably prescient in expressing the judgment that survival is largely dependent on having "old memories and young hopes."

FEATURE PRESENTATIONS

As a means of providing a useful and timely context for the 1991 Symposium attendees, a carefully balanced set of special presentations was arranged. Following a keynote address by Dean Toni Carbo Bearman, three talks were given which encompassed the three cardinal themes of WHCLIS '91—Productivity, Literacy, Democracy—by Dr. Joseph W. Duncan, Gary R. Rowe, and Dr. Elizabeth L. Young. The final contribution, during luncheon, was comprised of remarks by Kenneth W. Bleakley.

After acknowledging the array of experience and expertise assembled to explore the current international scene insofar as the roles of library and information services were involved, Chairman Robert Lee Chartrand offered this commentary on the continuing criticality of human mastery in a time of technological triumphs, citing the perceptive words of Lewis Mumford:

> The cycle of the machine is now coming to an end . . . Man is at last in a position to transcend the machine and to create a new biological and social environment in which the highest possibilities of human existence will be realized, not for the strong and lucky alone, but for all co-operating and understanding groups, associates, and communities.

Dean Bearman commenced her presentation by reminding the Symposium participants that at the first White House Conference on Library and Information Services (in 1979), it had been stressed that

> . . . access to information and ideas is indispensable to the development of human potential, the advancement of civilization, and the continuance of enlightened self-government.

Noting that while 12 major issues had been identified at the time of the WHCLIS '79 Pre-conference on "International Information Exchange," five had been highlighted as of top priority:

—coordination of U.S. information policies with worldwide developments,
—creation of a mechanism for coordinating U.S. information policies,
—improvement or acquisition of foreign materials for the United States,
—assessment of the impact of technology on the availability of information, and
—improvement of standards for facilitating international flow.

Turning to those changes which have taken place since the late 1970s, Dean Bearman highlighted three challenges facing us in the next decade: technological developments, changing needs and expectations of users of library and information services, and an increased awareness of the shrinking "global village." In the first instance, note was taken of the incredible impacts made by fibre optics, "faster, smaller, and cheaper" computers and ancillary equipment, fax systems, and the multiple-point access capabilities now in use. Turning to the user realm, emphasis was placed on the increasing sophistication of amateurs and professionals alike. And, the needs for information exist in such complex milieu as the environment, health care and nutrition, education, and other vital action infrastructures. And in the final focus, she alluded to recent events (Persian Gulf, Bangladesh, Tiananmen Square) and their coverage which provide full evidence of the shrinking global village.

In her closing comments, attention was shifted to those opportunities for corrective action by those responsible for international information availability, exchange, and utilization. Here, again, three "challenges" are delineated:

1. Overcoming barriers—economic, social, political, cultural—to the unrestricted low of needed information across boundaries, through international cooperative agreements, opening networks, and developing technical standards.
2. Educating and training people to develop and use information, which will involve greater sensitivity and awareness of cultural differences and the need for multilingual access to information systems and data.
3. Getting involved in setting the right priorities for developing information policies and providing the resources needed to strengthen less developed countries.

The second speaker, Dr. Joseph W. Duncan, effectively brought to bear his unique experience and responsibilities as he spoke on the "Productivity" theme. Admitting that the concept of productivity in information services is "very elusive," he further opined that "the role of information as a lubricant for the development and execution of international . . . is especially difficult." Yet, *"information is essential to the development of international transactions."*

In expanding on his assertion that "no international trade can occur in the absence of solid, accurate, and timely in-

formation about the trading partners." Dr. Duncan identified two approaches for measuring productivity improvement:

1. One is that of the librarian, where the measurement involves: How much time did I save for the scientist, engineer, social researcher when I did a more efficient search of the literature as defined?
2. The second is that of the management analyst, where the measurement is: How much did the information I supplied add to the cost effectiveness of the decision that was being made?

The essence of concern here, the speaker asserted, relates to the "subjective judgments" involving the efficacy of the decision itself and the information underpinning that decision.

Dr. Duncan then sought to set forth a framework for evaluating the value and productivity of information systems, but averred that "there are not many practical examples of the productivity of information activities." More importantly, he said, the "concepts of measuring the national income accounts make it extremely difficult to measure the impact of value added in information activities." Next was offered this definition:

> The basic concept of value added in the national accounts (e.g., GNP in the U. S.) is that value added is the sum of capital and labor inputs in information activities . . . this has no recognition of the "value" of the information provided.

This lack of a quality output measure applies to nearly all information products, resulting in "disparaging remarks about the lack of impact we have on the quality of life and the real national wealth of our society."

The subsequent portion of his talk was focused on the ANIMAL CRACKERS' product, which has been virtually unchanged for 90 years. However, Dr. Duncan pointed out, the addition of the "Universal Product Code (UPC)" resulted in providing both public and private types of information. After a detailed treatment of this product, he itemized the wide range of benefits this encoded information provides.

—For the Marketer, it can (for example) measure market share, evaluate new product testing, and analyze the sales effects of price change.
—For the Wholesaler, it can (for example) control inventory, measure waste and loss, and develop automatic billing systems for retailers.
—For the Retailer, it can (for example) reduce check-out error and simplify training, track sales associated with special promotions, and evaluate store management.

Following a discussion of "trade credit," so invaluable to both our domestic and the world economy, the speaker used the Mrs. Fields' cookie industry to illustrate the computer-oriented management of every facet of that business: sales, inventory, production, schedule maintenance for machinery, and ingredients' reorder. This is done using a single data base of information. This innovation information system has transcended traditional layers of management, as well as changing internal information flows and the functions of the layers.

In closing, Dr. Duncan iterated that three characteristics—the subjective nature of the information, the situation dependency of information, and the time dependency of information—make it difficult to measure the productivity gains that are information dependent. More attention must be paid, he declared, to the value and productivity enhancement of the information sector, "especially as we use information to lubricate the world economy as it moves forward toward a more market-oriented global decision making system in the 1990's."

The third speaker at the Symposium was Gary R. Rowe, whose creative work at Turner Educational Services has helped foster the belief that "the aim of literacy is not information for its own sake but useful knowledge that helps us to make our way in the world." Pointing out that an ongoing "revolution" is one concerned with knowledge, and that it is led by children, he told of a friend's 22-month-old daughter who already was operating a Macintosh computer! "Children," he explained," are the humans most unafraid of the new technologies."

> To a child, a computer is simply another kind of pencil or crayon. A television set is a friendly passport to the larger world outside of home and school and to the realm of fantasy, an electronic story book filled with images that are useful, amusing, and educational, and sometimes even terrifying.

Mr. Rowe went on to observe that in education and for libraries, "the only thing that's getting cheaper is the technology to access this abundance of information." Hardware and software, including satellite downlinks, now allow schools to reach out globally and "measure temperatures at cloud tops, track the position of the Gulf Stream, monitor deforestation, and track orbiting space craft."

Illustrating his comments with videotape excerpts, the speaker showed how we are, indeed, in a "new era in television news." Citing the power of television, he quoted Italo Calvino in his Norton lectures at Harvard University who observed that "whatever the next millennium might turn out to be, we are about to leave the millennium of the book." This did not mean that literature will come to an end, but "Only the form in which we have been accustomed to defining it!"

> The industrial technology of print . . . is giving way to a whole new image of what literacy is and that image is bound to the computer and to television. Books will not disappear. But the information in them will have value in relation to other media. Multimedia is the new buzzword in our language.

Noting that the formerly "casual relationships" among broadcasting, publishing, and computing are now merging, Mr. Rowe told of the 1987 experiment which became CNN NEWSROOM. This daily program now has 19,000 building enrollments in the U. S. and also is used overseas (e.g., Finland, Malta, France). As the attendees watched a videotape clip from CNN NEWSROOM, he emphasized that "the television screen will have the content of video sources but . . . the content of the computer and . . . the book." Using the Bible as an example, the speaker told how its stories could be rescued "from private, silent reading" and be rejuvenated in "libraries of sight and sound."

Next, five implications reflecting how television is changing the world were enumerated:

1. *Television maps its own culture* and is "not a mirror of what is traditional or what is given."
2. *The world of television has porous boundaries*, including its content, what arises from its conventions, and "the effects of what your neighbors may be saying about you on their televisions."
3. *Television works in collaboration with other media*, and no longer exists in isolation, as well as being measured by the effects of many media.
4. *No area of the world can expect immunity from the presence of television*, as this ubiquitous media form has shown in its coverage of Tiananmen Square and events in Baghdad.
5. *Television doesn't belong to broadcasters anymore, it belongs to everyone.*

In expanding on this last point, Mr. Rowe underscored the heightened role of the viewer in determining—partially through remote control and the VCR—television programming. Using the term "multimedia television," he stressed that it is "creating a new perception of what television is and with it a new sense of what literacy is." A final videotape called INTERACT '91 showed Symposium participants how children now can manipulate imagery with surprising sophistication.

In closing, several policy questions were enunciated:

—Multimedia and global television, with a new ability to cope with information and knowledge issues, now supersede traditional boundaries.

—Our metaphors for libraries as buildings that store print need to incorporate technologies that store images.

—Indexing multimedia to make its holdings more accessible requires new dimensions in that skill.

—Communications links serving society—who does and does not get served—reflect new issues of access and not just geography.

—The issue of language dominance will be the background hum on the international agenda the more pervasive media become.

—The democratization of information may threaten elites, for now multimedia can make everyone an editor or publisher.

And in his final statement, Mr. Rowe declared that "whatever technology holds for us in the next decade . . . it is my fervent, personal hope that after this thrilling way to learn, each student will want to sit down and relax with a good book."

Next at the rostrum was Dr. Elizabeth L. Young, who has combined interests and responsibilities in the worlds of high technology—both as head of the Public Service Satellite Consortium and now in a leadership role at COMSAT—and the humanities and education. In her reflections on the "democracy" theme, she spoke of two key areas: "first, about the channels of communication that are and will be available to us; and, secondly, about the complexities of sharing information that can loosely be labelled 'in the public good.'" Next came a description of conditions and needs in Eastern European countries, where there has been a need for even minimal communications services.

Dr. Young then related illustrative capabilities which even now are available, such as technology-support services at sea or on international flights. While asserting that "it is safe to say we solve almost any hardware or software issue that arises if by 'solving' we mean simply working with the physical properties of the systems," she reminded her listeners that other problems remain: "questions about who pays, who benefits, who controls the information that is accessed or disseminated." And, there are other identifiable questions anent freedom of information or the "spectre of 'gate keepers' in some environments."

One issue which she underscored, at this juncture, was concerned with the question of "how communications channels will grow and be regulated." This centers on where the financial support will come from for an increasing number of international distribution systems (e.g., to launch an INTELSAT satellite costs well over $200M). In some instances, consortium approaches—INTELSAT (with 120 members) and Inmarsat (with 64 countries)—or private sector sponsorship such as PanAmSat have been successful.

The policy issue at both the national and international levels poses the question of growth management or a completely laissez-faire approach. The impact on lesser developed parts of the world is obvious. On the regulatory front, the ITU-sponsored World Administrative Radio Conferences have worked well as cooperative forums to assign spectrum or competing uses. And, Dr. Young remarked, "we can be sure that satellite, fiber optic and cellular systems will grow, will penetrate into even the remotest areas, and will become increasingly versatile and responsive to user needs."

Although at first glance it would "seem that we cannot *export* 'democracy' through any specific means, whether libraries or satellite systems," the speaker pointed out, "we DO export democracy every day but in ways not always (or perhaps ever) part of a coherent policy and strategy." Contributing to the restructuring of Eastern Europe was Western television, radio (VOA and BBC), private telephonecalls, black market books, and the mails.

At this point, Dr. Young referred to the goals and programs of the Virginia Foundation for the Humanities and Public Policy, which she had chaired. Among these were library-centered discussion groups, museum exhibits, teachers' workshops, and an extensive program on the history of women in Virginia. Another group involved in setting policies and developing long-range plans, but at a national level, is the National Endowment for the Humanities.

The entrepreneurial initiatives both here and abroad have resulted in governmentally-sponsored activities (e.g., USIA's Voice of America) but, she stated, "the Disneys, MTVs, Sky-channels and CNNs of the world may be the real agenda setters." Also, to an ever increasing extent, Dr. Young reminded the audience, "we in the U. S. are the recipients of communication and information from abroad."

Next, the speaker asked a series of interlocking questions about the "positive furthering of information exchange, the 'democratization' of communications," including:

—Are there policies we can set, programs we can and should influence?
—What, then, of the needs of the social realm?
—What of education?
—What about those aspects of the arts and humanities that may fall outside of "popular culture"?

Dr. Young gave a number of examples whereby persons in various parts of the world could share information held elsewhere, and raised the necessary questions about costs, and the responsibilities of the public and private sectors.

But, she said, even if the financing issues are resolved, "we still come back to the critical role of the librarian." Citing a recent paper entitled "The Role of the Public Services Librarian: the New Revolution" by Brian Nielsen, the speaker stressed that "Technological advances are changing the way . . . librarians serve their patrons." This includes a need for training librarians to handle more complex technologies, and for more research in this area.

Finally, Dr. Young again placed emphasis on the two major issues of "accessibility" and "training," and ended with a memorable quotation from Thomas Jefferson who penned these words:

> We are always equal to what we undertake with resolution. . . . It is part of the American character to consider nothing as desperate; to surmount every difficulty by resolution and contrivance.

Augmenting the four foregoing presentations was a luncheon talk by Kenneth W. Bleakley, whose career assignments and current leadership with the Bureau of International Communications and Information Policy (Department of State) afforded a useful insight into the focus of the Symposium. Quoting Boris Pasternak, who declared that "Every human is born a Faust—with a desire to seek, to experience and to relate all that is in the world." These words in a less poetic form appear in Article XIX of the Universal Declaration of Human Rights, it was noted. He then informed the assembled participants that:

> Our common task as educators, information professionals, and government officials is to convert these lofty goals into reality during this age of global information.

Mr. Bleakley then focussed on "the communications network that is essential to our efforts and the hard political/economic realities that condition the possibility of success." He told of a new structure of various modern telecommunications' facilities—"some international, some closed to the public, and some in direct competition"—that complement traditional networks.

Among the barriers to universally available, affordable telecommunications services, he listed:

—The continued existence of monopolies and monopoly services;
—Discriminatory practices favoring domestic manufacturers, service providers, and investors vis-a-vis foreign suppliers of telecommunication equipment, services, and capital;
—Unreasonable national regulatory objectives that impede the development of telecommunications trade;
—The existence of calling rates at levels far exceeding the costs; and
—The unbalanced development of the global network leaving a majority of the world's non-urban population without basic telecommunications services.

Then, the speaker identified a set of guidelines which the United States believes can result in available, affordable universal services: liberalization of market access; introduction of multiple, competitive service providers; privatization of monopolistic international service organizations; resale of services with value added; and a move to bring the collection rate paid by end users toward costs of providing services.

Pursuing both bilateral and multilateral opportunities, the United States for example was supportive of including telecommunications services within the Uruguay Round negotiations. Currently, the U.S. is discussing requests and offers with other partners in the General Agreements of Tariffs and Trade (GATT) which might lead to a services agreement. Other potential interactions may occur with ITU and OECD functionaries. The former group, for 125 years the premier international organization for telecommunications standards, had "demonstrated flexibility in adapting to the changing environment." One recent decision by its International Consultative Committee for Telegraph and Telephone (CCITT) liberalizes the D-Series recommendations regarding the use of private, leased lines.

Expressing the feeling that "the international community is moving in a systematic fashion to reduce the structural and procedural impediments to the broad transfer of knowledge in all forms," Mr. Bleakley observed that the process is a "slow, uneven one. Much remains to be done." In touching on examples for the future agenda, he referred to the 1979 WHCLIS discussion guide on "Increasing International Cooperation." He indicated initiatives involving EC broadcast and privacy directives, and changes in "cultural imperialism." In regard to international standards, the challenge, he said, is to assure that these and frequency management "facilitate, not block, universal communication." Points of action included the role of regional standards-setting bodies, the need for a "Standards Summit," and the significance of the World Administrative Radio Conference in 1992.

The continuing imbalance which exists worldwide regarding telecommunications development shows the industrial bloc of "haves" spending $500B per year, and the other two-thirds of the world (the "have nots") spending $20B annually. Remedial action suggested includes:

—An ITU Bureau for Telecommunications Development
—Further commercialization and privatization action
—Policy seminars and training (e.g., in Eastern Europe) through a U.S. Telecommunications Training Institute
—Bilateral and multilateral assistance, with increased emphasis on information tools and techniques, rural development

In closing, he iterated the convergence now underway involving all branches of communications and information, and that we are "deeply involved in a global information age whose implications we are just beginning to explore."

SYMPOSIUM GROUP DISCUSSION HIGHLIGHTS

The five discussion groups which formed the deliberative core of the Symposium adopted, if in somewhat different ways, an approach to their task which embodied an initial retrospective stage of looking at the 1979 findings. It is encouraging to note, however, that as instructive as those issues and concerns had proven to be, the consensus among the present discussants was "not to look backwards, but to look forward." Admittedly, many of the fundamental results from the WHCLIS '79 pre-Conference sessions remained quite valid more than a decade later. But, all of the participants in this focal effort—aptly termed "The International Dimension"—shared the belief that the tumultuous times which comprised the 1980s have forced a rethinking of many principles, processes, and priorities which formerly shaped our perception of the unfolding Age of Information.

Report of Group I:

Overview of International Information Activities

Group Leader: George M. Kroloff

Rapporteur: Melvin S. Day

Summary:

The Preamble to Group I's final report stated that:

- Since 1979, the production, storage and distribution of information have become a more important aspect of power (individual, institutional, corporate, and political).
- To maintain a constructive role, the U.S. has a global responsibility to use information and technology for social good.
- Intergenerational changes over the years have raised expectations vis-a-vis how quickly information can be gathered and disseminated.

One evidence of this is the proliferation of powerful equipment, software services, and accessibility of information. For instance, there is more emphasis on individuals' access to content, through improved indexing and accuracy of information.

Recommendations:

1. No listing and explanation of all U.S. information policies exist. Because so much has changed since 1979, there should be an articulation of U.S. policies regarding international information activities (e.g., international information activities in the EC, the GATT, the OECD, the ITU, the UN, et. al.). This statement of policy is necessary because only an informed citizenry can create and support informed policies.
2. In 1979 the WHCLIS recommended there be improved information flows to the developing nations. In 1991 there should be improved two-way multimedia information flows **between** the developing nations . . . and there should be multi-directional flows between all nations, taking into account the transformation of Communist societies in Eastern Europe and the USSR. Thus, subject to national security requirements, a special effort in the public and private sectors is needed to assure the restoration of open two-way flows with these societies.
3. Increased resources should be directed to education and training for exploiting information technology for social good. Accelerating rates of learning worldwide, resulting from technological changes (such as television and the computer), must be encouraged.
4. More attention should be turned to ethical issues, particularly regarding political and privacy issues, because the powerful new information technologies (e.g., allowing easy access to personal information via computers) can be used for evil as well as good.
5. If the U.S. is to continue to be a constructive and powerful player in the global context, unrestricted access to available information is necessary.

Numerous overlapping **issues** and **trends** were discussed before arriving at the synthesis stated above. Among them:

- Globalization of the information industry.
- New methods of exchanging information.
- New barriers to information exchanges—such as the cost to get into data bases, protectionism, and classification of information by the U.S. and other governments which withhold data from the public.
- Need to open up libraries to the public, particularly in developing nations where local libraries contain important local information.
- Threats to "have nots" because they cannot obtain and use available information—for example health and agricultural information—yet there is no unifying theory of how information helps development, in part because information is *invisible* as a resource.

- Reduce illiteracy by giving a higher priority to learning, training to make technology and resources work, technical support, and stronger infrastructures.
- Capacity of society and the individual to apply available information.
- Need to define U.S. role in UN effort for literacy, particularly with the U.S. out of UNESCO.
- Globalization of issues (environment, quality of life) and the need to access relevant information in other countries.
- Scarcity of capital for investment in information resources in the U.S. and abroad.
- Changing demographics in the U.S. (increase in minorities and diversity of cultures) and its impact on the information needs of our society and its relationship with other societies. (How will this affect our views in the worldwide clash of cultural values about the worth and use of information?).
- Information is a commodity, with a price, a fact that many do not realize and a factor in protection of intellectual property which is vital to creating new information and yet is an impediment to many information exchanges.
- Human behavior aspects of new information and technologies (especially differences between adult and child perceptions).
- The partnership role of government and private sectors (U.S. and abroad) and the domestic differences of opinion regarding information flows between government and many in the private sector (need for information to make informed decisions which are intertwined with values of liberty and freedom for which the world looks to the U.S. for leadership).
- Multi-media literacy *(Mediacy)* has meant that literature today is more than the printed word, thus libraries are less a repository, more a switching center . . . the librarian is an information analyst.
- Libraries today come to us as well as we go to them.
- Need for greater ability to classify and retrieve information and be able to have the literacy to deal with raw data, not just processed data, yet be able to customize information and understand a variety of languages (does this call for machine translations of information, including books?).
- Without paper trails, "Where does data come from?" becomes an ever more important question.

Report of Group II:

Impact of Technology and Networks

Curtis L. Fritz, Group Leader — James W. Morentz, Jr., Rapporteur

Summary:

To facilitate deliberations, all of the concerns and ideas expressed were cast into a life-cycle framework of the *Market Place*—where information technology and services are generated—consisting of government, commercial, and academic elements which affects or ignores compatibility and standards, access, applications, dissemination, and evaluation.

Access—to whom, when, how, and at what cost?

Applications—including education, employment, entertainment.

Dissemination—to user audiences for meeting needs and solving problems: individual, family, group, institutional, national, regional, global.

Evaluation—of benefits, lifestyle enhancement, deficiencies, refinement of needs, etc., for feedback to the market place and adjustment of the products and services.

Unfortunately, the missing element in this life cycle is the last link, evaluation. There are no conscious mechanisms for evaluation and feedback. Therefore, we are not doing a good job of defining goals, appraising our progress towards them, nor making adjustments accordingly.

The following interests and concerns were expressed:

1. The need to promote and support research in the field of machine translation, including the development of standards, on a cooperative basis with other international professionals and organizations. (This is needed to help facilitate the international flow of information across the natural language barriers. Present technology is still inadequate.)
2. The need to develop international standards to assist in the consistent, rapid transfer of useable information from the developed to the developing world. (This echoes an issue at the first conference.)
3. As the world moves from the printed to the graphic and imagery forms of information, standards must be developed to control, use, exchange, and preserve these priceless graphic records. (A group should be convened at the earliest possible date to recommend codifying and controlling procedures —which are now non-existent.)
4. The need to convene an international group to develop and propose mechanisms for the effective

and economical dissemination (and retrieval) of information to developing countries and remote areas, bearing in mind their lack of financial resources, facilities, and infrastructure for information use.

5. The need to establish an R&D program to deal with the growing technical and language interface problems between and among national computer-based information systems, so as to facilitate the international use and information exchange between such systems.
6. The need to insure the receipt of information from the foreign community and its availability to the U.S. community. (Reverse dissemination).
7. The need for a labelling system for information products to aid consumers (including policy makers) in assessing their content and utility (and side effects?). (Bar code? FDA/FIA?). This might also be a step towards measuring information services as a contribution to the national economy. We need a new measure of contribution to lifestyle and well-being—not just output of goods and services.
8. The need to "educate the public" as to the value and contribution of information and information technology in modern society . . . so that when national and very local budgets are being cut those activities and equipment will not be inequitably reduced (particularly in the schools and libraries).
9. The inadequate identification of users and their information needs (worldwide) is a major inhibiter to the application of all the wonderful and abundant technology that is already available. A sunset group could be established (WH OST, NAS, NCLIS, OTA?) to study and develop a conceptual structure for doing this user-needs identification on a continuing basis, leading to the reduction of the present excessive time lag of technological application and transfer.
10. The need to insure that essential information, technology, and information services are available in all countries and areas, rich or poor, for time-critical emergency decision making in the event of man-made or natural disasters.
11. The need for the study, development, and implementation of feasible methods to narrow the information technology-cultural gap existing between the developed and developing worlds, with particular focus on women and minority populations.
12. Within the general objective of making information and information technology available to all people, one of the most effective ways would be to "target" information professionals and intermediaries (librarians, teachers, etc.) whom enable flow down to the needy groups. (Novice users need an intermediary guide/interpreters in becoming information literate.)
13. The need for a training program to prepare a cadre of people in the developing countries to utilize library and information services resources that are or will be made available to them. (This echoes a recommendation of the previous conference.)
14. In that children demonstrate a great acceptance and adaptability to new things (language, technology, etc.) before they learn the constraints of fear of failure, the sooner that all the world's children have access and ease with information technology (even in "elementary" form) the sooner the "information lubricant" will tie us into a global society. This approach has the potential of a quantum improvement in worldwide Literacy, Productivity, and Democracy.

Although there was disagreement on priorities, there were **major areas of emphasis and consensus:**

1. We have and will have an abundance of information technologies (networks, remote control, satellites, simulation, camcorders, hypertext, holography, micronization, mass memory, portability, expert systems, HDT, multimedia, graphic interface, imaging, fiber optics, etc.)
2. There is an unacceptable time lag between availability and application of information and information technology to problems and needs—individual, national, international.
3. New methods and mechanisms are required for the evaluation of information products, technologies, and services, and for the evaluation of their contribution to lifestyle and the economy.
4. New methods and efforts, and probably new mechanisms, are required for the identification of users and their needs and for the evaluation of library and information services as impacting on goals—to enhance Literacy, increase Productivity, and strengthen Democracy—and indeed, even to continuously examine, define, refine, and delineate our goals.

Report of Group III:

Business and Economic Aspects

Oswald H. Ganley, Group Leader

James R. Trawick, Rapporteur

Summary:

In exploring the often complex subject of the business and economic aspects of library and information services in our time, the discussants necessarily commenced by looking at what was different between 1979 and now. For one thing, the Nation then had only one telephone company, AT&T, which meant essentially that there was no competition for basic communications services. The situation internationally—in terms of political and economic issues—was, of course, immensely varied from that found today. FAX devices and VCR systems were essentially unknown, and we were only emerging from a mainframe-oriented operating environment and what some still term a "centralization culture." The personal computer (PC) was just starting to be used by the multitudes.

Issues

The decision was made, early on, to take four or five "major" national issues of consensus concern, and examine these to see how communications and "information" might assist in the resolution of problems associated with those issues. Further, we adopted the assumption that the foreseeable future would be a period in which no government funds, to speak of, would be available for many of the potential courses of action which could be identified.

Five significant issues were placed on the priority list, although others were mentioned tangentially:

- In the first instance, in order to achieve a more "national" connotation, the components of competitiveness, productivity, and innovation were dealt with as a single major issue.
- The second issue of prime concern involved trade, a matter of lasting importance, and firmly interwoven with such other priority agenda items as budget deficits, technological "drain", and tariffs.
- Thirdly, the status of developing countries and their ability to access, process, and utilize systems affording communications capabilities and an array of information-handling technologies.
- The fourth issue was captured in the word "globalization," referring to the attitude or policy of placing the interests of the entire world above those of individual nations or other interest groups.
- And finally, the group focused on the special situation in Eastern Europe, and the ramifications as that untangles, of information policies and technologies.

Recommendations:

Although the emergent recommendations which follow may appear to be fairly clear-cut, in many instances the attendant discourses were wide-ranging. Here, in particular, the unique experience and insights of the discussants afforded a breadth of comprehension which was most useful.

1. The productivity-competitiveness-innovation issue recommendation concentrated on making government information resources available to small companies. It was believed that large companies possess the requisite resources to conduct their business; indeed, may be better off in certain areas than the U.S. government. Another suggestion here was to create selected partnerships among government and private institutions. It was noted that the government cannot do this by itself, nor is the private entity in a position to undertake such an initiative. Through such "institutional partnerships" it can be possible to access and more fully utilize priority information that is necessary for the business community to be competitive and be sustained as a national resource. The final recommendation within this thrust area involved the recognition of the importance of international standards, with particular attention to the matter of "interoperability" (or reciprocal activity).
2. As concerns the convoluted trade issue, it was recommended that all efforts be continued to "encourage the free flow of information across national borders." There was a consensus that the "library," which now exists in many guises, should be the "intermediary" to the user community. Questions were raised as to how this best can be ensured, including outreach mechanisms that allow transfer of variously presented information (microform, electronic, FAX) to distant users.
3. As to the developing countries, and their needs for the ways and means to fully participate in the Age of Information, perhaps the most important recommendation involved the crucial roles of the U.S. government and certain international financial institutions. Their implicit and explicit responsibilities for affording developing countries with the resources and "know-how" to fully use communications and information systems in order to attain national maturation can hardly be overstated. Here, again, libraries must act as the "vehicle" to establish two-way exchange be-

tween people and their governing and enabling institutions. The establishment of new forms of collaborative relationships both by national and international institutional mechanisms represents an action alternative that needs to be fully examined and assessed.

4. Globalization turned out to be a more difficult topic, for while the broad concept of reciprocal arrangements may be grasped, many of its dimensions and facets were harder to agree upon, indeed quite elusive. Both good and bad effects were introduced for discussion, but there was a shared belief that a strengthening of future globalization would be enhanced by the careful development of national information policies, with participation by the U.S. government, international organizations (United Nations, ITU, GATT), and the private sector. These groups in concert, will be able, based on their responsible roles in identifying, supporting, and making available essential information resources and services, to lend a credibility plus tangible aid to fostering an interoperable milieu. Another key aspect treated by the discussants was concerned with the training of U.S. personnel to work in the international environment. It was felt that the preparation of selected youth, through orientation and education opportunities, can result in greater awareness and participation.
5. The dilemma facing those concerned with improving the difficulties in Eastern Europe is multifaceted. Not only must the basic communications and information services be replaced, in many instances, but there will have to be an extensive retraining of personnel to operate and maintain the refurbished infrastructure. Cost considerations and the time required to reorient involved bureaucracies will be major deterrents to any rapid improvement. The desire to upgrade these information services exists, but European as well as American public and private institutions will have to involve themselves in bringing about this new capability to generate, process, store, and distribute the required spectrum of information.

Finally, having noted these areas for focal action, it is instructive once again to return to the "Summary of Findings" contained in the 1979 "International Information Exchange" volume and note those relevant concerns as they now appear more than a decade later.

Report of Group IV:

Policies and Governance

Jane Bortnick, Group Leader

Thomas J. Galvin, Rapporteur

Summary:

The eleven participants in Group IV represented public sector governmental, not-for-profit, non-governmental, and private sector information service providers. It included individuals associated with two major federal libraries and with three of the principal professional societies and trade associations in the library and information field.

The group was enjoined by its leader "not to look back, but to look forward". Discussion began with the premise that despite the fact that many of the fundamental findings of the 1979 White House Conference in the international area remain valid in 1991, nonetheless the information world has changed dramatically in the decade of the 1980s.

Despite significant differences in professional orientation among the group members, the discussions were characterized by a high level of agreement, especially between those representing the public sector and those primarily identified with the private sector.

Major Findings:

1. Information simultaneously displays three distinct aspects. It is at once a public good that should be accessible to all on an equal basis; a commodity that is bought, sold, and traded in the domestic and the international markets; and a national strategic, military, and economic resource. In the present Information Age, it has become an economic resource of increasing importance in an increasingly competitive world market place.
2. International information policy issues and policy debates tend to mirror domestic information policy issues and debates. So, to achieve a coherent international information policy, the United States must simultaneously put its own domestic information policy house in order. And the U.S. must also exhibit sensitivity to the differing values and differing priorities of other cultures, and of other members of the international community.
3. Information policy issues, like most other public policy issues, are characterized by conflicts among competing values: access rights, proprietary rights, and privacy rights. These conflicts are reconciled in the crucible of public policy development. But in another sense they remain competing values that simply have to continue to coexist. All three of these values have both domestic dimension and an international dimension.

Recommendations:

1. Increase both governmental and private sector support so that research in information management may expand both domestically and worldwide. Expand international cooperation in information management research.
2. Make information that originates in the U.S., such as U.S. government information, more accessible abroad.
3. Make information that originates abroad more accessible in the United States and improve U.S. utilization of information that originates abroad, especially in science and technology.
4. Enjoin the U.S. government to continue to press for reduction or elimination of barriers to access to worldwide markets for information products and information services. Promote internationally the values that have made the United States a leader in the creation and dissemination of information resources, such as presuming an inherent right of access to information, placing government information in the public domain, asserting the primacy of the non-governmental sectors in information dissemination, and fostering diversity and competition in the information industry.

Selected Related Comments

- Protection of intellectual property may represent either an essential stimulus to the free flow of information across national boundaries, or a significant barrier to the free flow of information.
- Technology can either facilitate access or it can be a barrier to worldwide equality of access to information.
- The appropriateness of using information as a tool of U.S. foreign policy, as for example in the South African book boycott, is open to question.
- Strategies for enhancing international access to information originating in the United States might include establishing depository libraries overseas, improving subject access to U.S. government information, especially in electronic form, permitting sale of U.S. government publications on credit, and designating staff members from the Library of Congress, the National Library of Medicine and the National Agricultural Library as "Information Attaches" in U.S. embassies.
- Strategies to improve the free flow of information across national boundaries must be sensitive to the desire of both developed and developing countries to preserve their national culture identities.
- International access to scientific and technical data and information presents special problems.

Report of Group V:

Programs and Services for Society

Joseph E. Clark, Group Leader

Kenneth W. Hunter, Rapporteur

Summary:
We decided, as did one other group, not to look back at 1979 in any specifics, but rather to look forward. But we realized towards the end of our discussion that we had done that with somewhat of a biblical reference. We too, thought of the Tower of Babel as we drew to a close. We noted that as with the biblical reference not only did the Lord dream up a problem by creating that tower, but in some following passages he dreamed up a solution, which in the modern day may very well be the computer.

We came to a framework for who should pursue these solutions we have dreamed up, the institutions and the individuals who are involved, a set of concepts that need to be pursued, and a short list of recommendations.

Requirements:
International library and information services to society involve a wide array of government to government, institution to institution and people to people programs. The success of these international activities hinges on meeting specific requirements, including the following:

1. Services should complement the local culture.
2. Services should facilitate local activities and institutions.
3. The focus of the services should be on local problems.
4. Services should be designed to meet the needs of individuals requiring alternative media delivery systems, including audiotapes.
5. Services should provide for bilateral programs to meet the special needs of newly arrived Americans from other nations, and to support special economic relationships.
6. Services should be designed to meet the needs of people requiring multiple language skills.
7. In our collective activities and in each service we should develop and support the creation of an international information commons.
8. In our collective activities and in the design of services we should foster the expanded collection, processing, access to, and dissemination of technical information.

9. We should foster a wide range of exchange and training programs for professionals, practitioners and students.
10. We should foster active participation by the library and information technology community in its efforts to educate people in both our collective international activities and in our local services.
11. We should support the oral, visual, and interactive learning approaches that predominate in developing countries.

These eleven requirements should be used as criteria for judging the effectiveness of our current programs and for guiding the design of new programs.

Recommendations:
We developed nine specific recommendations that should be incorporated into the Conference's final policy recommendations, as follows.

1. The federal government should develop the resources needed, both human and technological, to overcome the language barrier.
2. The U.S. library and information technology community should participate actively in ongoing international programs to enhance world education and literacy.
3. The U.S. library and information technology community should actively support rural and small community libraries in the U.S. and other countries.
4. The U.S. should accept the offer of the Mexican government to allow its direct support of libraries in U.S. communities with significant groups of Americans from Mexico in order to better meet the cultural needs of these people.
5. The U.S. Agency for International Development should support the enhancement of international information resources by incorporating specifications for information and telecommunications requirements in their programs.
6. The U.S. should create a "Peace Corp" of information volunteers.
7. The U.S. should create institutions and processes for the acquisition, processing, access to, and dissemination of technical information.
8. The information and information technology policies and rules of nations and other institutions should be revised to meet an "information commons" way of thinking.
9. The library and information technology community should develop a wide range of exchange programs, both bilaterally and multilaterally, for professionals, practitioners, and students.

BIOGRAPHIES OF KEY SYMPOSIUM LEADERS

Toni Carbo Bearman. Dean of the School of Library and Information Science, University of Pittsburgh since 1986 . . . For six years, Executive Director, U.S. National Commission on Libraries and Information Science . . . Senior consultant for strategic planning and new product development, Institution of Electrical Engineers (London) . . . headed U.S. delegation to Intergovernmental Council Meeting of the UNESCO General Information Program . . . Vice-Chair of U.S. National Committee for FID . . . author of more than 80 articles and speeches . . . AAAS Fellow . . . President of ASIS.

Kenneth W. Bleakley. Senior Deputy Coordinator and Director for International Communications and Information Policy . . . previously Deputy Assistant Secretary of State for International Refugee Assistance . . . foreign service assignments overseas included San Salvador (Deputy Chief of Mission), Panama, Bolivia, and Spain . . . served in various capacities with U.S. delegations to several UN entities . . . taught economics at The American University (San Salvador).

Jane Bortnick. Assistant Chief, Science Policy Research Division, and Specialist in Information Science and Technology, Congressional Research Service (Library of Congress) . . . prepares special reports and studies, provides consultations and briefings for Congress . . . author of such major reports as *International Information Flow: Forging a New Framework* and *The Impact of Information Technology on Science* . . . stint as special advisor to National Research Council . . . AAAS Fellow . . . Writer and lecturer in U.S. and abroad . . . on International Advisory Board of Atwater Institute.

Robert Lee Chartrand. Sr. Specialist, then Sr. Fellow, in Information Policy and Technology, Congressional Research Service, Library of Congress (24 years) . . . author or editor of 20 books and major congressional reports (e.g., *Critical Issues in the Information Age*) . . . Fulbright appointee to work with Italian Parliament . . . senior lecturer for UNDP to People's Republic of China . . . Advisory Committee, WHCLIS '79 . . . ASIS Award of Merit . . . AAAS Fellow.

Joseph E. Clark. Deputy Director, National Technical Information Center since 1983 . . . four years with Office of Science and Technology Policy, responsibilities including scientific information, patents, and technological innovation . . . Acting Administrator of newly formed U.S. Fire Administration . . . developed widely recognized statistical models in private sector . . . Woodrow Wilson Fellow in Public and International Affairs at Princeton.

Jean M. Curtis. Executive Director, White House Conference on Library and Information Services . . . formerly special assistant and then Acting Director of the Women's Bureau, U.S. Department of Labor . . . oversaw planning and management of a national Women's Bureau Conference (1990) . . . District Service Director for Congressman Thomas N. Kindness (five years) . . . served four consecutive terms as Butler County (Ohio) Recorder.

Melvin S. Day. An internationally known leader in information science activities both during his three decades in the U.S. government and now in the private sector . . . served as Director of the National Technical Information Center (1978-1982), following service as the Deputy Director of the National Library of Medicine . . . earlier headed the Office of Science Information Service at NSF . . . before that led the S&T Information Division for NASA . . . Chairman of the U.S. Delegation to the UNESCO/GIP Intergovernmental Council.

Joseph W. Duncan. Corporate Economist and Chief Statistician for The Dun & Bradstreet Corporation since 1982 . . . chairs D&B's Information Resources Coordinating Council . . . columnist on economic trends for *D&B Reports* magazine . . . author of the "Statistics Corner" in *Business Economics* . . . previously chief statistician for the Office of Information and Regulatory Affairs in OMB . . . U.S. representative to the UN Statistical Commission . . . past president and chairman of the National Economists Club . . . ASA Fellow.

Curtis L. Fritz. Management consultant to private/public sectors with emphasis on expert systems and IRM activities . . . with Federal government, led creation of early interagency systems for foreign intelligence (SCIPS), foreign affairs (FAIME), and the S&T information (NASTINS) communities . . . UNDP consultant and civil servant, headed training and management IT projects in Far East, Middle East, and Europe . . . Program Manager for White House sponsored interagency Decision Information and Display System (DIDS).

Thomas J. Galvin. Professor of Information Science and Policy, as well as Director of the new interdisciplinary Ph.D program in information science, at SUNY-Albany . . . Served as Executive Director of ALA (1985-1989) . . . previously (1974-1985) was Dean, School of Library and Information Science, University of Pittsburgh . . . co-recipient of MLA Elliot Prize in medical librarianship literature . . . author or editor of 18 books and over 100 articles and reports . . . delegate to WHCLIS '79 . . . in 1980 appointed to U.S. National Commission on UNESCO . . . consultancies in Greece, Nigeria, Saudi Arabia, and Spain.

Oswald H. Ganley. Executive Director, Program on Information Resources Policy, Center for Information Policy Research, Harvard University . . . directs Program's activities in international, trade, productivity, competitiveness, and national security fields . . . formerly Deputy Assistant Secretary of State for Science and Technology . . . Vice Chairman, OECD Committee for S&T Policy . . . consultant to Department of State (CIP) . . . co-author with Gladys D. Ganley of *To Inform or to Control: the New Communications Networks.*

Kenneth W. Hunter. Senior Faculty Member of the U.S. General Accounting Office's Training Institute focusing on the public policy . . . participated in the design and implementation process and issues affecting changes in federal policymaking since the 1960s . . . Conference Chairman for the World Future Society . . . co-editor of *Futures Research Quarterly* . . . adjunct professor in political science at the University of Maryland—Baltimore County . . . authorship includes "Navigating the Nineties" in *The GAO Journal.*

George M. Kroloff. President, Kroloff, Marshall & Associates, a Washington, D.C. public relations firm specializing in international and domestic communications strategies . . . while Special Assistant to the Postmaster General, was in charge of introducing the ZIP Code . . . Administrative Assistant to the Chairman of the Senate Foreign Relations Committee . . . created the public relations department for *The Washington Post* . . . President of the Washington division of the major PR firm which provided counsel for WHCLIS '79 . . . author of "The New World Information Order."

James W. Morentz, Jr. President of Research Alternatives, Inc., and an internationally recognized expert in developing advanced tools and techniques for emergency management . . . conceived the "Comprehensive Emergency Management (CEM)" philosophy and process in the late 1970s . . . originator of the PC-based "Emergency Information System," with 1,000 such systems in use world-wide . . . co-editor of *Information Technology Serving Society* . . . Bicentennial Conference Coordinator for "America in the Information Age" event.

Gary R. Rowe. Senior Vice President of Turner Educational Services, Inc., a division of Turner Broadcasting System . . . has led the development of video-based learning products and services originating TV programming . . . guided launch of CNN NEWSROOM, a daily news program designed for schools . . . led the development of NEWS ACCESS (1987) and Turner MultiMedia . . . formerly special assistant to Senator Charles H. Percy . . . taught media-related courses at Columbia College and Loyola University . . . principal weekend talk host for WIND radio.

James R. Trawick. Founder and President of Trawick & Associates, a computer services company . . . 30 years of management and technical experience in the computer science industry with such firms as IBM, Computer Science Corporation, Cordatum, Inc., Computer Data Systems, Inc., and Martin Marietta Corp. . . . served on several national commissions, including a group reviewing the National Information Issues of the 1990s . . . member of the organizing committee for the Polish High Technology Conference.

Elizabeth L. Young. Vice President for Aeronautical Services in COMSAT's Mobile Communications division . . . previously was VP for INMARSAT Policy and Representation . . . for five years, served as President of the Public Service Satellite Consortium, an organization which pioneered in the use of communications satellites for public service . . . held several positions in public broadcasting, including the directorship of radio and TV stations at The Ohio State University . . . longtime interest in the arts and humanities, with memberships on such boards as the Virginia Foundation for the Humanities.

SYMPOSIUM PARTICIPANTS

Group I: Overview of International Information Activities

George M. Kroloff, Group Leader
Kroloff, Marshall & Associates, LTD
1350 Connecticut Ave. N.W.
Suite #900
Washington, DC 20036

Melvin S. Day, Rapporteur
4309 Chesapeake St., N.W.
Washington, DC 20016

Dr. Toni Carbo Bearman
School of Library & Information Science
University of Pittsburgh
305 LIS Building
Pittsburgh, PA 15260

James E. Beverly
2268 N. Upton St.
Arlington, VA 22207

Wilson P. Dizard
Center for Strategic & International Studies
Suite 400
1800 K St., N.W.
Washington, DC 20006

Joseph C. Donohue
615 Third St., N.E.
#4
Washington, DC 20002

Gary North
U.S. Geological Survey
508 National Center
Reston, VA 22092

Maria G. Pisa
National Agricultural Library, USDA
Room 200, NAL Bldg.,
10301 Baltimore Blvd.
Beltsville, MD 20705

Gary R. Rowe
Turner Educational Services, Inc.
1 CNN Center
P.O. Box 105366
Atlanta, GA 30348

John K. Swearingen
919 S. Lee
Alexandria, VA 22314

Dr. Abdul M. Turjoman
Embassy of Saudi Arabia
600 New Hampshire Ave., N.W.
Washington, DC 20037

Robert A. Vitro
Information Industry Association
555 New Jersey Ave., N.W., Suite 800
Washington, DC 20001

Patricia A. Wand
The American University
4400 Massachusetts Avenue, N.W.
Washington, DC 20016

Group II: Impact of Technology and Networks

Curtis L. Fritz, **Group Leader**
19644 Club Lake Rd.
Montgomery Village, MD 20879

Dr. James W. Morentz, Jr.,
Rapporteur
Research Alternatives, Inc.
906 Hungerford Dr.
Suite 1
Rockville, MD 20850

Dino A. Brugioni
301 Storck Rd.
Hartwood, VA 22406

Francesco A. Calabrese
FAC Technology Inc.
8150 Leesburg Pike
Suite 600
Vienna, VA 22182

Sal Costabile
4720 Montgomery Lane
Suite 1110
Bethesda, MD 20814

A. Del Frate
National Aeronautics and Space Administration
Code NTT
Washington, DC

Louis Feldner
1251 4th St., S.W.
Washington, DC 20024

Charles M. Goldstein
National Library of Medicine
Lister Hill Center
8600 Rockville Pike, Bldg. 38A
Bethesda, MD 20892

Dr. Carl Hammer
3263 "O" St., N.W.
Washington, DC 20007-2843

Niels C. Hauffe
Science & Technology Office
Embassy of South Africa
4801 Massachusetts Ave., N.W.
Suite 350
Washington, DC 20016

The Honorable & Mrs. Francis P. Hoeber
5151 Williamsburgh Blvd.
Arlington, VA 22207

Dr. Richard K.C. Hsieh
National Library of Medicine
8600 Rockville Pike
Building 38, Rm. 2W-14
Bethesda, MD 20894

Stanley Kalkus
Washington Navy Yard
Bldg. 44
Washington, DC 20374

Wilda B. Newman
Johns Hopkins University
Applied Physics Laboratory
Johns Hopkins Rd.
Laurel, MD 20723-6099

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Group III: Business and Economic Aspects

Oswald H. Ganley, Group Leader
Harvard University
Aiken 200
33 Oxford St.
Cambridge, Massachusetts 02138

James R. Trawick, Rapporteur
Trawick & Associates
7900 Wisconsin Ave.
Suite 300
Bethesda, MD 20814

Walter M. Carlson
216 West Hilton Dr.
Boulder Creek, CA 95006

K. C. Chartrand
Research Alternatives, Inc.
966 Hungerford Dr.
Suite 1
Rockville, MD 20850

Vary T. Coates
U.S. Office of Technology Assessment
Washington, DC 20510

Dr. Joseph W. Duncan
The Dun & Bradstreet Corporation
299 Park Ave. 24th Floor
New York, NY 10171

Beth Duston
Information Strategists
814 Elm St.
Manchester, NY 03101

Raymond G. Fox
Society for Applied Learning
Technology
50 Culpeper St.
Warrenton, VA 22186

Peter Hegedous
Joint World Bank International
Monetary Fund Library
Washington, DC 20431

Dr. Carol Lee Hilewick
4400 East-West Highway
Suite 30
Bethesda, MD 20814-4501

George L. Marling
2626 E. Meredith Dr.
Vienna, VA 22183-4041

Ruth K. Seidman
Massachusetts Institute of Technology
10-500
Cambridge, MA 02139

Elinor H. Swaim
National Commission on Libraries and
Information Science
351 Richmond Rd.
Salisbury, NC 28144

Mona Zakka
Zacca Enterprises Inc.
5617 Lanham Station Rd.
Lanham, MD 20706

Group IV: Policies and Governance

Jane Bortnick, **Group Leader**
CRS SPR
Library of Congress
Washington, DC 20540

Dr. Thomas J. Galvin, **Rapporteur**
118 Draper Hall
University of Albany
Albany, NY 12222

Kenneth Allen
Information Industry Association
555 New Jersey Ave., N.W., #800
Washington, DC 20001

Dr. David R. Bender
Special Libraries Association
1700 18th St., N.W.
Washington, DC 20009

Roy Forey
Science & Technology Officer
Embassy of Great Britain
3100 Massachusetts Ave., N.W.
Washington, DC 20008

Donald C. Haubrath
Chief
Library Programs Division
U.S. Information Agency
301 4th St., S.W.
Washington, DC 20547

John G. Lorenz
National Commission on Libraries and
Information Science
1111 18th St., N.W.
Washington, DC 20036

Anne J. Mathews
U.S. Department of Education
555 New Jersey Ave., N.W.
Washington, DC 20208-5571

Michael McCamman
Office of UN Social and Refugee
Affairs
Department of State
Washington, DC 20520-6319

Dr. Harold M. Schoolman
National Library of Medicine
Building 38, Room 2E07
8600 Rockville Pike
Bethesda, MD 20894

Guy St. Clair
OPL Resources Ltd.
1701 16th St., N.W. #644
Washington, DC 20009

Paul Vassallo
Washington Research Library
Consortium
4207 Forbes Boulevard
Lanham, MD 20706

Peppino N. Vlannes
2934 Beau Lane
Fairfax, VA 22031-1304

Gia Warringa
Documentalist S&T
Commission of the European
Communities
2100 M St., N.W., 7th Floor
Washington, DC 20037

Group V: Programs and Services for Society

Dr. Joseph E. Clark, **Group Leader**
National Technical Information Service
5285 Port Royal Rd., Room 200F
Springfield, VA 22161

Kenneth W. Hunter, **Rapporteur**
Training Institute
U.S. General Accounting Office
441 G St., N.W., Room 7830
Washington, DC 20548

Margaret Chisholm
Graduate School of Library & Information Science
FM-30 University of Washington
Seattle, WA 98195

Frank Kurt Cylke
NLS/BPH
Library of Congress
1291 Taylor St., N.W.
Washington, DC 20542

Jerome C. Glenn
American Council for the U.N. University
4421 Garrison St., N.W.
Washington, DC 20016-4055

Nagy Hanna
The World Bank, Room H2015
1818 H Street, N.W.
Washington, DC 20433

Sarah T. Kadec
2833 Gunarette Way
Silver Spring, MD 20906

Robert Knisely
Office of the Secretary, Room 10200
Department of Transportation
400 7th St., S.W.
Washington, DC 20590

Dr. Ana Maria Magaloni
AGUA #728 PEDREGAL DE SAN ANGEL
Mexico D.F. 01900

Richard G. Maynard
2403 Davis Ave.
Alexandria, VA 22302

Hal Silverstein
203 West Marshall St.
Falls Church, VA

Gerald J. Sophar
3518 Fitzhugh Lane
Silver Spring, MD 20906

Lucille C. Thomas
Library Consultant & Researcher
1184 Union Street
Brooklyn, NY 11225

Elena Tscherny
District of Columbia Public Library
901 G Street, N.W., Room 410
Washington, DC 20001

Dr. Nickolas P. Vlannes
2934 Beau Lane
Fairfax, VA 22031-1304

Dr. Elizabeth L. Young
COMSAT Corporation
950 L'Enfant Plaza, S.W.
Washington, DC 20024

1979 PRE-CONFERENCE ON INTERNATIONAL INFORMATION EXCHANGE

SUMMARY OF FINDINGS

Inherent in the findings and recommendations of the five discussion groups is an awareness, amply underscored in the identification of key issues and action options, of the complexities that shape and affect international information flow. Although official Government positions, where they exist, often are a strong if not overriding factor, the interests of multinational corporations and other private sector groups increasingly must be taken into account. Twelve major issues were identified during the deliberations of the five discussion groups.

- coordination of U.S. information policies with worldwide developments,
- creation of a mechanism for coordinating U.S. information policies,
- improvement of information flow to LDCs,
- improvement of acquisition of foreign materials for this Nation,
- overcoming restrictions on international data flow,
- addressing the problem of lag between technology and society's response to it,
- minimizing threatening aspects of new information technology,
- assessment of the impact of technology on the availability of information,
- improvement of standards for facilitating international information flow,
- improvement of U.S. economic standing through the use of information technology,
- identification of existing international information programs, and
- assessment of the impact on U.S. users of exporting information technology.

Considering the focal areas of the five groups, it is not surprising that there was an overlap of emphasis in certain areas, as shown by the reports of the discussion groups.

SUMMARY OF INTERNATIONAL ISSUES' RESOLUTIONS (1979)

At the conclusion of the 1979 White House Conference on Library and Information Services, delegates had approved 64 resolutions, 25 by voice vote and 39 by paper ballot. Of these, six dealt directly with international issues. Two were approved in general session, the texts of which follow:

International Information Exchanges—E-1

Whereas, there is a need to start and expand dialogue among members of the international community for the sharing of all forms of information and

Whereas, for humanitarian purposes, the sharing between nations of all unclassified information should be encouraged, and

Whereas, there is a need to encourage dissemination of information of all kinds, and to encourage cooperation in the exchange of information and personnel among all countries, and

Whereas, the library and information community has an important role to play in achieving effective exchange of information,

Therefore be it *Resolved*, that a new Federal program be enacted and funded which would provide for an exchange and training program for library and information service personnel, and

Be it further *Resolved*, that protocol for library and information exchange in the United States support the participation in the Universal Availability of Publications and encourage the elimination of trade and other barriers to the exchange of library materials and information of all kinds, and

Be it further *Resolved*, that Federal and State Programs for networking are established, consideration for international communication and sharing be included within the framework of the networks which are created, and

Be it further *Resolved*, that Federal Funds should be made available for the implementation of international networking.

Federal International Communication and Accountability—E-2

Whereas, many departments and agencies of the United States Government are involved in the international exchange of information, and

Whereas, there is no central coordination of activities, resulting in the possible duplication of effort, waste, and gaps of coverage, and

Whereas, the United States should examine its role in the new information society and should formulate policies that are prospective rather than reactive.

Therefore, be it *Resolved*, that the President:

(1) Make a report on governmental agencies engaged in these activities and attendant costs;

(2) Make recommendations to eliminate duplication of effort and waste, and to expand coverage where appropriate, and

Be it further *Resolved*, that on the basis of this report the President formulate necessary procedures to coordinate United States participation in international communication and information programs, both public and private.

Four additional resolutions were passed subsequently by paper ballot, including proposals for the establishment of specific mechanisms for enhancing international information exchange. They ranged from the convening of a one-time International Conference on Library and Information Services to the establishment of permanent facilities to improve coordination and exchange activities (e.g., an international youth library, and a center for international studies.) Also, there was a proposal supporting the on-going improvement of international copyright protection. The actual proposals were passed in this form:

International Conference—E-3

Whereas, recognizing that the unimpeded flow of information and published materials is essential to the promotion of international peace and security, and

Whereas, the need for an international standard for exchange programs in the fields of science, technology, and other cultural matters among nations and international corporations is acknowledged, and

Whereas, noting that the UNESCO, the United Nations University, and the Economic and Social Council of the United Nations University, and the Economic and Social Council of the United Nations are interested in the enhancement of all cultures, the promotion of civil rights, and the status of women in all nations.

Therefore be it *Resolved*, that the White House Conference on Library and Information Services recommend to the President of the United States that an international conference on Library and Information Services be held.

Center For International Studies—E-4

Whereas, there is a need in the United States for knowledge of foreign languages and cultures, and

Whereas, the President's Commission on Foreign Languages and International Studies has reported in October, 1979, and recommended ways to address this need,

Therefore, be it *Resolved*, that the delegates to the White House Conference support the concept of regional and national centers to further international understanding, as recommended by the Commission.

Establish an International Youth Library—E-5

Whereas, the encouragement of appreciation of other cultures should start at an early age, and there exist few comprehensive international collections of children's literature in the United States, and

Whereas, a collection of this kind would be of great value to scholars in the field of children's service and could serve as a coordinating point and demonstration of such services,

Therefore be it *Resolved*, that a center, similar to the International Youth Library in Munich, be established in the United States, and

Therefore be it *Resolved*, that through this center, libraries throughout the country be encouraged to emphasize children's programming which recognizes the positive values of cultural differences and which promotes international understanding.

International Copyright Agreement—E-6

Whereas, the United States is a member of the Universal Copyright Convention, and

Whereas, the new United States Copyright Act allows the United States to move toward appropriate international copyright arrangements,

Therefore be it *Resolved*, that the United States should continue to seek improved international copyright accords.

In addition to those resolutions which emerged directly from the pre-conference group discussions, there were other proposals that resulted in approved resolutions, such as those dealing with the creation of improved standards to facilitate the exchange of information both domestically and internationally: "Technology and Uniform Standards—C-1" and "Cooperative Standards and Networking—C-14."

Another area relating to the delegates' concern about increasing international cooperation was evidenced in two resolutions focusing on responsibilities within the executive branch. These suggested the creation of entities within existing governmental agencies which could support directly improvements in sharing and exchange of information and materials with other nations, and were entitled "National Clearinghouse in Department of Education—B-8" and "Institute for Scientific and Technological Cooperation—B-12." And finally, the Conference concentrated on upgrading information transfer to the U.S. territories, both through direct supply of greater amounts of materials, and the incorporation of them into regional, national, and international networking projects (see "Information Systems in U.S. Territories—D-3")

SELECTED READINGS

The volume and variety of writings about "international information activities" increase apace with every passing year. In form, they range from books and traditional journal articles to "think tank" studies, congressional reports, and "white papers" from disparate sources. The following selection is illustrative of such contributions to this focal literature.

Bortnick, Jane. National and international information policy. Journal of the American Society for Information Science, v. 36 no. 3, May 1985: 164-168.

Brown, Clarence J. The globalization of information technologies. The Washington quarterly, winter 1988: 89-101.

Chartrand, Robert Lee, ed. Critical issues in the Information Age. Metuchen, N.J., Scarecrow Press, 1991. 336 p.

Chartrand, Robert L. and James W. Morentz, Jr., eds. Information technology serving society. New York, Pergamon Press, 1979. 150 p.

Council of Academies of Engineering and Technological Science. National Academy of Sciences. Globalization of technology. Washington, D.C., National Academy Press, 1988. 216 p.

de Sola Pool, Ithiel. (ed. by Eli Noam). Technologies without boundaries. Cambridge, Harvard University Press, 1990. 283 p.

Dizard, Wilson P. and S. Blake Swensrud. Gorbachev's information revolution: controlling Glasnost in a new electronic era. Boulder, CO, Westview Press. 99 p.

Ganley, Oswald H. and Gladys D. Ganley. To inform or to control? Second edition. Norwood, NJ, Ablex Publishing Corp., 1989. 263 p.

Giuliano, V., M. Ernst, J. Dunlop, and S. Crooks. Passing the threshold into the information age: a perspective for federal action on information. Boston, Arthur D. Little, 1978. 2 vol. (various pagings). Republished by the ALA in 1978, 1 vol., 134 p.

Hunter, Kenneth W. Navigating the nineties. The GAO Journal, no. 8, Winter Spring 1990: 12-20.

Japan Computer Usage Development Institute. The information society: a Year 2000 Japanese goal. Computer White Paper. 1970 edition. Kasumigaseki Building, 3-2-5 Kasumigaseki, Chiyodaku, Tokyo, Japan. 1970.

Kroloff, George. The New world information order. Washington, D.C., Ruder & Finn, 1978. 10 p.

Nora, Simon and Alain Minc. The information society. Cambridge, MIT Press, 1980. 186 p.

Organization for Economic Co-operation and Development (Paris). Information technology and economic prospects. Vol. 12 of ICCP series. New York, Elsevier Science Publishing Inc., 1987. 221 p.

Slamecka, Vladimir and Davis B. McCarn. The information resources and services of the United States: an introduction for developing countries. Washington, D.C., U.S. Agency for International Development, 1979. 50 p.

U.S. Congress. House. Committee on Government Operations. International information flow: forging a new framework. Report, 96th Congress, 2d session. Washington, D.C. U.S. Govt. Print. Off., 1980. 61 p.

U.S. Congress. House. Committee on Science and Astronautics. The management of information and knowledge. A compilation of papers prepared for the eleventh meeting of the Panel on Science and Technology. Committee print. (For sale by the Sup. of Doc's.) 1970. 130 p.

U.S. Congress. Senate. Committee on Foreign Relations. International telecommunications and information policy: selected issues for the 1980s. Prepared by Jane Bortnick of the Congressional Research Service, Library of Congress. Committee print. 98th Congress, 1st session. Washington, D.C. U.S. Govt. Print. Off., 1983. 60 p.

U.S. Congress. Senate. Committee on Labor and Human Resources. Subcommittee on Education, Arts, and Humanities. International information exchange: relevant activities of the White House Conference on Library and Information services. Prepared by Robert L. Chartrand and Jane Bortnick of the Congressional Research Service, Library of Congress. Committee print, 96th congress, 2d session. Washington, D.C., U.S. Govt. Print. Off., 1980. 156p.

U.S. Domestic Council Committee on the Right of Privacy. National information policy. Report to the President of the United States. Washington, D.C., National Commission on Libraries and Information Science, 1976. 233 p.

Wenk, Edward, Jr. Tradeoffs: imperative of choice in a high-tech world. Baltimore and London, The Johns Hopkins Press, 1986. 238 p.

EPILOGUE

In the half-century since Wendell Willkie popularized a "new" One World concept, an astonishing evolution of the human race's treatment of "information" has taken place. With the advent of cascading, startling new information technologies—especially in the computer, video, and telecommunications fields—innovators and users alike have come to agree that "imagination is the power of the mind over the possibilities of things," and nowhere does this seem more evident than in the realm of technologies supporting library and information services.

Major examinations of the "Information Revolution" have been undertaken with effect in such nations as France, Canada, Japan, and the United States. Corollary to these perceptive initiatives have been reports from such sources as the Organization for Economic Co-operation and Development, the Brussels Mandate, UNESCO, and the United Nations.

A comprehensive look at the many facets and interrelationships involved in this ever-altered world of information was taken in 1976 by the U.S. Domestic Council Committee on the Right of Privacy. Featured in *National Information Policy* were the points of contact and linkages between and among information communications, information technology, information economics, information privacy, information confidentiality, information science, information networks, and information management. In the intervening years, conceptual overlapping and interactive modes of operation have proliferated, often exacerbated by mankind's insatiable need for more data and information, and a desire to have these more quickly, susceptible to intricate manipulation, and available in diverse forms and formats.

It has been noted correctly that although the process has indeed been evolutionary, the rapidity of change often obscures the underlying hard work and thought which must precede each stage of progress. The essence of mankind's forward movement perhaps was best captured in these words of Antoine de Saint Exupéry:

> It is true that a sudden illumination may now and then light up a destiny and impel a man in a new direction. But illumination is vision, suddenly granted the spirit, at the end of a long and gradual preparation.